

AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Currently amended) The magnetic recording medium of claim [[1]] 9, wherein the underlayer has substantially no material having a L₁₀ lattice structure and the magnetic layer precursor material is an alloy having a <111> growth orientation and is selected from the group consisting of substantially equiatomic CoPt, FePt, CoPd and FePd, and mixtures thereof.

3. (Currently amended) The magnetic recording medium of claim [[1]] 9, wherein the magnetic layer precursor is annealed to form the magnetic layer comprising fct L₁₀ lattice structure.

4. (Currently amended) The magnetic recording medium of claim [[1]] 9, wherein the derivative structure is a face-centered tetragonal (fct) L₁₀ and the c-axis is canted about 35° out-of-plane of the magnetic layer.

5. (Currently amended) The magnetic recording medium of claim 3, wherein the c-axis is canted about 35° out-of-plane of the magnetic layer.

6. (Currently amended) The magnetic recording medium of claim [[1]] 9, wherein the lattice structure of the close-packed planes of the underlayer material substantially matches the {111} planes of the fct L₁₀ lattice structure of the grains of the magnetic layer.

7. (Currently amended) The magnetic recording medium of claim 6, wherein a mismatch between the lattice structure of the underlayer material and that of the fct L_{10} lattice structure of the magnetic layer is less than 10%.

8. (Currently amended) The magnetic recording medium of claim [[1]] 2, wherein the underlayer is directly in contact with the magnetic layer.

9. (Previously Presented) A magnetic recording medium comprising (a) a magnetic layer comprising grains and (b) an underlayer comprising an underlayer material having a hexagonal-closed-packed (hcp) or face-centered-cubic (fcc) lattice structure with a $<0002>$ or $<111>$ growth orientation, wherein at least two-thirds or more of the grains of said magnetic layer have a derivative structure of fcc that is not a fcc lattice structure, the derivative structure having a c-axis that is at an angle, canted out-of-plane of the magnetic layer, wherein the underlayer material is one of a Ru alloy, a Ag alloy, a Pt alloy, and a Pd alloy.

10. (Original) The magnetic recording medium of claim 9, wherein the underlayer is on an amorphous TiCr alloy.

11-21. (Canceled)

22. (Original) A magnetic recording medium comprising (a) a magnetic layer comprising grains and (b) an underlayer comprising an underlayer material having a hexagonal-closed-packed (hcp) with a $<0002>$ growth orientation, wherein at least two-thirds or more of the grains of said magnetic layer have a derivative structure of fcc that is not a fcc lattice structure, the derivative structure having a c-axis that is at an angle, canted out-of-plane of the magnetic layer.

23. (New) The magnetic recording medium of claim 22, wherein the underlayer has substantially no material having a L_{10} lattice structure and the magnetic layer precursor material is an alloy having a $<111>$ growth orientation and is selected from the group consisting of substantially equiatomic CoPt, FePt, CoPd and FePd, and mixtures thereof.

24. (New) The magnetic recording medium of claim 22, wherein the magnetic layer precursor is annealed to form the magnetic layer comprising fct L_{10} lattice structure.

25. (New) The magnetic recording medium of claim 22, wherein the derivative structure is a face-centered tetragonal (fct) L_{10} and the c-axis is canted about 35° out-of-plane of the magnetic layer.

26. (New) The magnetic recording medium of claim 24, wherein the c-axis is canted about 35° out-of-plane of the magnetic layer.

27. (New) The magnetic recording medium of claim 22, wherein the lattice structure of the close-packed planes of the underlayer material substantially matches the {111} planes of the fct L₁₀ lattice structure of the grains of the magnetic layer.

28. (New) The magnetic recording medium of claim 27, wherein a mismatch between the lattice structure of the underlayer material and that of the fct L₁₀ lattice structure of the magnetic layer is less than 10%.

29. (New) The magnetic recording medium of claim 22, wherein the underlayer is directly in contact with the magnetic layer.